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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/735,353

12/11/2003

James D. Anderson JR.

2003-0072.01

6958

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7590

02/06/2006

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EXAMINER

VO, ANH T N

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,353

Applicant(s)

ANDERSON ET AL.

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 27-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 27-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/11/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

NON-FINAL REJECTION

Claims 24-26 and 41-44 have been canceled by the applicant accordance with the Selection filed on 12/05/05.

Claim Rejections

Claim Rejections - 35 USC § 112

Claims 27 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 27, it is unclear where the “ink filter cap” 9 comes from and how it relates to the filter and the regulator since it is not clearly defined in this claim.

In claim 40, the recitation “ink filter”, “an ink filter cap” and “a printhead base” on lines 4-8 and “flow regulator” on lines 6-7 is confusing because it is unclear if these are additional “filter”, “cap”, “base” and “regulator” or further recitation of the previously claimed “filter”, “cap” and “base” on line 3 and “regulator” on line 5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 33, 35-36 and 40 are rejected under 35 USC 103 (a) as being unpatentable over Cowger et al (US 4,931,811) in view of Anderson et al (US2002/0191058, S/N=10/170480).

Cowger et al discloses in Figure 1 an ink cartridge comprising:

- a printhead base including at least one ink channel (16) in fluid communication with at least one nozzle at a bottom;
- a filter (26) being positioned on a standpipe in fluidic communication with the ink channel; and
- wherein the filter is screens woven of stainless steel wire being heatstaked on the top of the standpipe (column 3, lines 34-50).

However, Cowger et al et al does not disclose that a filter is laser-welded and includes an transparent or opaque polymer material.

Nevertheless, Anderson suggests in Figures 1-5 an ink cartridge comprising a filter (26) made of woven plastic and is laser-welded to the base, see lines 1-16, column 2 of page 2, for eliminating any wrinkles or mis-position of the screen to overcome potential print quality problems, see the third paragraph, column 1 of page 2.

It would have been obvious to a person having skill in the art at the time the invention was made to laser-weld the filter of Cowger et al as suggested by Anderson et al for the purpose of eliminating any wrinkles or mis-position of the screen to overcome potential print quality problems.

Claims 7-23, 34, 37-39 are rejected under 35 USC 103 (a) as being unpatentable over Cowger et al (US 4,931,811) in view of Anderson et al (US2002/0191058, S/N=10/170480) and Brandon et al (US 5,537,136).

Cowger et al in view of Anderson et al 1 an ink cartridge comprising all of the limitations of the base claim as stated above but does not disclose a filter cap being mounted onto the filter.

Brandon et al suggests in Figures 1-3 an ink cartridge comprising a filter cap (17) for limiting the introduction of air bubbles and particulate matter in the flow of ink toward the printhead, see the Abstract.

It would have been obvious to a person having skill in the art at the time the invention was made to employ the filter cap as suggested by Brandon et al in the modified ink cartridge of Cowger et al for the purpose of limiting the introduction of air bubbles and particulate matter in the flow of ink toward the printhead. Noted that the filter cap of Brandon et al would be laser welded in the modified ink cartridge of Cowger et al as suggested by Anderson et al.

With regard to claims 17-23 and 34 since the filter cap and the filter are laser-welded to the standpipe in the modified ink cartridge of Cowger et al, selecting the optimum mounting steps as recited in these claims is considered to be a matter of a mechanical design expedient for an engineer. Lacking of showing any criticality, it would have been motivated to select the optimum mounting steps as claimed for the purpose of reducing cost and time.

With regard to claims 37-39, although Cowger et al and Brandon et al does not suggest mounting the filter to an inner circumferential recessed ledge of the standpipe and the filter cap to the upper circumference surface of the standpipe as recited in claim 37; however, a skilled artisan realized that this filter and this cap must be secured in a particular mounting manner to the standpipe so that they can withstand the internal pressure of ink. Thus, select the optimum mounting manner as claimed is considered to be a mechanical design expedient for an engineer. Lacking of showing any criticality, it would have been obvious to a person having skill in the art at the time the invention was made to select the optimum mounting manner as claimed in the modified ink cartridge of Cowger et al for the purpose of securely holding the filter and cap to the standpipe.

Claims 27-32 and 40 are rejected under 35 USC 103 (a) as being unpatentable over Taylor (US 5,737,001) in view of Brandon et al (US 5,537,136) and further in view of Anderson et al (US2002/0191058, S/N=10/170480).

Taylor discloses in Figure 1 a method for assembling a printhead comprising:

- a printhead base being provided, said base having an ink channel (93, 96, 94, 95) for communicating with a nozzle (28);
- a filter (67) being provided; and
- an ink regulator (24) being provided in fluid communication with at least the one ink channel.

However, Taylor does not disclose that the filter is laser-welded to the base, a filter cap is laser-welded to the base or the filter cap is laser welded to the filter.

Nevertheless, Brandon et al suggests in Figures 1-3 an ink cartridge comprising a filter cap (17) for limiting the introduction of air bubbles and particulate matter in the flow of ink toward the printhead, see the Abstract.

Anderson suggests in Figures 1-5 an ink cartridge comprising a filter (26) made of woven plastic and is laser-welded to the base, see lines 1-16, column 2 of page 2, for eliminating any wrinkles or mis-position of the screen to overcome potential print quality problems, see the third paragraph, column 1 of page 2.

It would have been obvious to a person having skill in the art at the time the invention was made to employ the filter cap as suggested by Brandon et al in the ink cartridge of Taylor for the purpose of limiting the introduction of air bubbles and particulate matter in the flow of ink toward the printhead and laser weld the filter or the cap for the purpose eliminating any wrinkles or mis-position of the screen to overcome potential print quality problems

CONCLUSION

Art Unit: 2861

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo, whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M. The fax number of this Group 2861 is (571) 273-8300.

A handwritten signature in black ink, appearing to be 'Anh T.M. Vo', written in a cursive style.

ANH T.M. VO
PRIMARY EXAMINER

February 1, 2006